

Serial No. 10/022,618

Atty. Docket No. LeA 35 010

Amended Claims (Attorney Docket No. LeA 35 010)

1. (Currently amended) A method for detecting tumor cells and their precursor cells in uterine cervical smears comprising  
    contacting the cells with ~~signalling~~ color marked reagents that specifically bind to at least two molecular markers of cervical cancer,  
    simultaneously detecting color signal intensities from said markers,  
    combining the color signal intensities, and  
    measuring and accrediting the combined color signal intensities, thereby detecting tumor cells and their precursor cells in uterine cervical smears.
2. (Cancelled).
3. (Previously presented) The method according to claim 1, wherein one of the at least two molecular markers is selected from the group consisting of her2/neu, p16, p53, MN, mdm-2, bcl-2, EGF receptor, and specific DNA from the HPV subtypes 6, 11, 16, 18, 30, 31, 33, 35, 45, 51 and 52.
4. (Previously presented) The method according to claim 1, wherein the at least two molecular markers are selected from the group consisting of her2/neu and p16, EGF-R and p16, p53 and her2/neu, her2/neu and mdm-2, bcl-2 and p16, bcl-2 and her2/neu, or p16 and p53.
5. (Previously presented) The method according to claim 1, wherein three molecular markers of cervical cancer are detected.
6. (Cancelled).
7. (Cancelled).
8. (Cancelled).
9. (Cancelled).
10. (Cancelled).
11. (Cancelled).

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12. (Previously presented) The method according to claim 5, wherein at least one of the three molecular markers is selected from the group consisting of her2/neu, p16, p53, MN, mdm-2, bcl-2, EGF receptor, and DNA from the HPV subtypes 6, 11, 16, 18, 30, 31, 33, 35, 45, 51 and 52.
13. (Previously presented) The method according to claim 5, wherein at least two of the three molecular markers are selected from the group consisting of her2/neu and p16, EGF-R and p16, ~~or~~ p53 and her2/neu, her2/neu and mdm-2, bcl-2 and p16, bcl-2 and her2/neu, and p16 and p53.
14. (Previously presented) The method according to claim 1, further comprising automated diagnosis using a diagnostic expert system.
15. (Currently amended) A method for detecting tumor cells and their precursor cells in uterine cervical smears comprising  
    contacting the cells with ~~signaling~~ color marked reagents that specifically bind to at least two molecular markers of cervical cancer,  
    simultaneously detecting color signal intensities from said markers at a first wavelength,  
    repeating said detection at a second wavelength,  
    combining the color signal intensities, and  
    measuring and accrediting the combined color signal intensities, thereby detecting tumor cells and their precursor cells in uterine cervical smears.